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Achromobacter Pneumonia

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PNEUMONIA IS ONE of the illnesses most frequently resulting in hospital admission. Yet, the specific cause of this common clinical condition is often difficult to determine, especially in small community hospitals where the laboratory experience and materials may be limited. Sensitivity profiles may, however, provide clues to the diagnosis and successful treatment of pneumonia.

Achromobacter xylosoxidans, first identified by Yabuuchi and Oyama[1] in 1971, is a Gram-negative bacillus and may be confused with *Pseudomonas* organisms. In fact, their sensitivity profiles may be quite similar, with the notable exception of their differing sensitivities to sulfa drugs. Recognition of *Achromobacter*'s characteristic sensitivity profile may help distinguish these two very similar organisms.

TABLE 1.—*Sensitivity of* Achromobacter xylosoxidans

Antimicrobial Drugs	*Sensitivity*
Amikacin	R
Ampicillin	R
Carbenicillin	S
Cefamandole	I
Cephalothin	R
Chloramphenicol	R
Clindamycin	R
Erythromycin	R
Gantrisin	S
Gentamicin	I
Kanamycin	R
Oxacillin	R
Penicillin	R
Trimethoprim/sulfamethoxazole (Septra)	S
Tetracycline	R
Tobramycin	I
Vancomycin	R

R = Resistant I = Intermediate S = Sensitive

Report of a Case

A 71-year-old woman who had never smoked was seen with a three-day history of fever, cough and anorexia. There was production of between 2 and 3 oz of thick, grayish brown sputum per day. There was a documented weight loss of 18 kg (40 lbs) over the past two years. There were at least ten previous episodes of pneumonia, several occurring in childhood. An extensive workup for weight loss and possible malignancy had been conducted previously, with completely negative findings on all testing, including cultures and cytology of sputum for tuberculosis, a body scan and α_1-antitrypsin immunology test. Other medical problems included a benign cyst of the maxillary sinus plus hiatus hernia with reflux and esophagitis controlled with cimetidine.

On admission the patient was noted to be pale, febrile and dyspneic at rest. Moist rales were heard in the left lung field. X-ray studies of the chest showed two infiltrations on the right side. Leukocytes numbered 9,100 per cu mm and determination of arterial blood gases revealed moderate hypoxemia. The electrocardiogram was interpreted as showing right axis deviation, P pulmonale and low voltage, suggesting chronic pulmonary disease. Pulmonary function tests showed severely re-

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stricted and obstructed lung function, with the forced expiratory volume 48 percent and vital capacity 26 percent of predicted.

Because of the suspicion of an anaerobic pneumonia, a transtracheal aspiration was done. Thick, white, sweet-smelling, almost caseous material was obtained. Culture of the aspirate grew out 4+ small Gram-negative rods. The sensitivity profile was remarkably resistant to all antimicrobial drugs except carbenicillin and sulfa drugs (see Table 1). Minimal inhibitory concentration (MIC) levels were obtained for sulfa drugs and showed pronounced sensitivity (MIC 0.5 μg/ml).

The patient was treated with trimethoprim-sulfamethoxazole (Septra) for three weeks. The lung infiltration cleared and the patient regained 11.34 kg (25 lbs). The Centers for Disease Control identified the organism two months later as *A xylosoxidans*.

Comment

A xylosoxidans is an organism only recently recognized and reported. The biochemical and morphologic features are distinguishable from *Pseudomonas* sp and were characterized by the Centers for Disease Control in 1979.[2] It may be waterborne and transmitted as recognized by Shigeta and co-workers[3] who found that it had contaminated hospital ward containers of chlorhexidine and caused cerebral ventriculitis. *A xylosoxidans* has also been found in cases of chronic otitis externa as reported by Yabuuchi and Oyama[1] and Pien and Higa.[4]

A xylosoxidans probably occurs more frequently than recognized. The clue to the diagnosis may be in the sensitivity profile, where it resembles *Pseudomonas* sp, with the notable exception of *A xylosoxidans'* sensitivity to sulfa drugs. A review of the bacteriologic sensitivity profiles at our local hospital over a two-year period showed two other organisms reported as *Pseudomonas* with comparable sensitivity profiles. Awareness of this fact may provide physicians with an early diagnosis and patients with appropriate treatment.

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Wegener's Granulomatosis With Polycythemia

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ERYTHROCYTOSIS can be a sign of a primary myeloproliferative disorder or can be associated with a multitude of other diseases.[1-3] Frequently it is not possible to determine whether erythrocytosis merely coincides with polycythemia rubra vera or whether it is due to the underlying disease.[4] We report a case of polycythemia in association with Wegener's granulomatosis. To date, we are unaware of any association between vasculitis and polycythemia.

Report of a Case

A 71-year-old woman entered the hospital in 1979 for a diagnostic lung biopsy. Her illness dated back to 1973 when she noted urinary frequency and back pain. Results of her physical examination were normal and no splenomegaly was found. Laboratory values were reported as follows: A serum creatinine was 5.6 mg per dl (N=1 to 1.5) and the erythrocyte sedimentation rate was 103 mm per hour (N=1 to 20). She had a proteinuria of 0.8 grams per 24 hours (N less than 1.5) and a creatinine clearance of 10 ml per minute (N=104 to 125). The hemoglobin was 8.4 grams per dl, hematocrit was 27 percent, mean corpuscular volume (MCV) was 94 femtoliter and leukocytes numbered 5,700 per cu mm, with 62 neutrophils, 1 band form, 35 lymphocytes, 1 monocyte and 1 eosinophil; platelets numbered 395,000 per cu mm (normal 200,000 to 350,000). The peripheral blood smear showed anisocytosis and poikilocytosis with occasional burr cells and microcytes. Stools were negative for occult blood and the

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